

Th1 and Th2 Immune response in *Hymenolepis nana* infection

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Abstract

Background & Objective: Although many experimental studies provide convincing evidence, that type II immunity is protective against helminthes, recent data in mice reveal that Th1 are also important in some cestods like *Hymenolepis nana*. To reveal the role of Th1 and Th2 lymphocyte in immunity against *H.nana*, the levele of IL12, IFN γ , IL5, IL13 was determined in serum of human infected with *H.nana*.

Materials & Methods: In a case control study in 2006 in Mazandaran Medical Sciences university a total of 31 patients (case) with *H.nana* infection and 30 clinical healthy people (control) were included in this study. Measurment of IL12, IFN γ , IL13 and IL5 in serum samples were performed by solid-phase sandwich enzyme linked immunosorbant assay. Differential leukocyte count also was done. T test, mannwhitney test and wilcoxon W test were used for data analysis.

Results: The mean concentration of IFN γ , IL13, IL12, IL5 in the sera of patient with *H.nana* infection were higher than control group, but only the difference between concentration of IFN γ (P<0.05) and IL13 (P<0.05) in two groups were significant. There was an increase in percentage of monocytes, Eosinophils and lymphocytes in patient when compared to the control group, but this increase was not significant.

Conclusion: Results form the present study are in agreement with experimental study in that both Th1 and Th2 responses occurs in *H.nana* infection.

Key Words: *Hymenolepis nana*, Cytokines, Infection

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